

## AMENDMENTS TO THE CLAIMS

Kindly cancel claims 13-15.

Kindly add new claims 29-37 as shown in the following listing of claims.

The following listing of claims will replace all prior versions and listings of claims in the application.

*Listing of Claims*

Claim 1 (previously presented): A method for providing a recommendation list from a plurality of items, comprising the steps of executing in a data processing system:

specifying an adaptable constraint filter, using constraint forming rules, to select ones of the items satisfying a constraint;

selecting the ones of the plurality of items that satisfy the constraint filter;

computing predicted values based on a recommendation filter, for the selected ones of the items; and

appending the selected ones of the items meeting predetermined criteria to the recommendation list.

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Claim 2 (original): The method of claim 1, wherein appending selected ones of the items further includes appending the selected ones of the items to the recommendation list when the predicted value exceeds a predetermined number.

Claim 3 (original): The method of claim 1, wherein appending selected ones of the items further includes appending a predetermined number of items to the list.

Claim 4 (previously presented): The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint containing free variables to the ones of the items.

Claim 5 (previously presented): The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint containing bound expressions.

Claim 6 (previously presented): The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a boolean constraint filter.

Claim 7 (previously presented): The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint to the ones of the items, wherein the constraint signifies equality.

Claim 8 (previously presented): The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint to the ones of the items, wherein the constraint signifies category membership.

Claim 9 (original): The method of claim 1, wherein computing the predicted value further includes evaluating the selected ones of the items with collaborative filtering.

Claim 10 (original): The method of claim 1, further comprising the step of:

truncating the recommendation list when a predetermined number of the selected ones of the items on the recommendation list has been met.

Claim 11 (previously presented): The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes

obtaining data from a user; and

adding the data to the constraint filter.

Claim 12 (original): The method of claim 1, wherein specifying a constraint filter further includes

obtaining the constraint from an operator; and

B1 storing the constraint filter in memory.

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Claims 13-15 (canceled)

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Claim 16 (currently amended): An apparatus designed to provide a recommendation list from a plurality of items in a data processing system, comprising:

a processing component configured to process instructions for selecting items from the plurality of items by:

applying a constraint filter to ones of the items;

applying a recommendation filter to ones of the items, and

determining an order for the constraint filter applying step and the recommendation filter applying step ~~of the filters to apply to the plurality of the items;~~ and

a recommender component configured to append the selected items to a recommendation list based on the constraint filter and the recommendation filter.

B2 Claim 17 (previously presented): The apparatus of claim 16, wherein the processing component computes predicted values based on the recommendation filter.

Claim 18 (original): The apparatus of claim 16, wherein the processing component further

determines the order of the filters to apply to the plurality of the items based on the cost of the filters;

applies the constraint filter first when it is determined that the cost of the constraint filter is lower than the cost of the recommendation filter; and

applies the recommendation filter first when it is determined that the cost of the recommendation filter is lower than the cost of the constraint filter.

Claim 19 (original): The apparatus of claim 16, wherein the processing component applies a constraint filter on a boolean constraint containing free variables.

Claim 20 (original): The apparatus of claim 16, wherein the processing component applies a constraint filter containing bound expressions.

Claim 21 (original): The apparatus of claim 16, wherein the processing component applies a constraint filter based on a boolean constraint.

Claim 22 (original): The apparatus of claim 16, wherein the processing component applies a constraint filter that signifies category membership.

Claim 23 (original): The apparatus of claim 16, wherein the processing component applies a constraint filter that signifies equality.

Claim 24 (original): The apparatus of claim 16, wherein the processing component computes predicted values by evaluating each ones of the items with collaborative filtering.

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Claim 25 (original): The apparatus of claim 16, wherein the recommender component is further configured to truncate the recommendation list when a predetermined number of the ones of the items on the recommendation list has been met.

Claim 26 (original): The apparatus of claim 16, further comprising an input component configured to:

obtain the constraint from an operator; and

store the constraint filter in a memory.

Claim 27 (original): The apparatus of claim 16, further comprising an input component configured to:

obtain data from a user; and

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add the data to the constraint filter.

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B3 Claim 28 (previously presented): The apparatus of claim 16, wherein the processing component is further configured to adaptively specify the constraint filter, using a set of constraint-forming rules.

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Claim 29 (new): A method of generating a recommendation from a plurality of items having assigned category memberships representing attributes of the items, comprising:

receiving a recommendation request, the recommendation request including a value for a free variable;

applying a series of filters to each of the items, the series comprising a constraint filter based on a constraint comprising the free variable and a recommendation filter for furnishing a predicted rating value; and

generating a recommendation based on the predicted rating value or values for the item or items that pass the constraint filter and the recommendation filter.

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Claim 30 (new): The method of claim 29 further comprising:

building the constraint using constraint forming rules; and

incorporating the constraint into the constraint filter.

Claim 31 (new): The method of claim 29 wherein the applying step comprises:

determining a lowest cost order of applying the constraint filter and the recommendation filter; and

applying the constraint filter and the recommendation filter in the lowest cost order.

Claim 32 (new): The method of claim 31 wherein the order determining step comprises:

providing the constraint filter with a generation interface and a rejection interface;

providing the recommendation filter with a generation interface and a rejection interface;

determining a cost for a first order, the first order being applying the generation interface of the constraint filter before applying the rejection interface of the recommendation filter;

determining a cost for a second order, the second order being applying the generation interface of the recommendation filter before applying the rejection interface of the constraint filter; and

establishing one of the first and second orders as the lowest cost order based on the respective costs thereof.

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Claim 33 (new): The method of claim 29 wherein the recommendation generating step comprises generating a list of recommendations based on predicted rating values of the items that pass the constraint filter and the recommendation filter being in excess of a specified rating value.

Claim 34 (new): The method of claim 29 wherein the recommendation generating step comprises generating a list of recommendations based on a specified number of the items that pass the constraint filter and the recommendation filter with highest predicted rating values.

Claim 35 (new): A method of generating a recommendation from a plurality of items having assigned category memberships representing attributes of the items, comprising:

building a constraint using constraint forming rules;

incorporating the constraint into a constraint filter.

receiving a recommendation request;

applying a series of filters to each of the plurality of items in response to the recommendation request, the series comprising a recommendation filter for furnishing a predicted rating value, and the constraint filter; and

generating a recommendation based on the predicted rating value or values for the item or items that pass the constraint filter and the recommendation filter.

Claim 36 (new): A method of generating a recommendation list from a plurality of items having assigned category memberships representing attributes of the items, comprising:

B4 building a constraint using constraint forming rules;

incorporating the constraint into a constraint filter having a generation interface and a rejection interface;

providing a recommendation filter for furnishing a predicted rating value, the recommendation filter having a generation interface and a rejection interface;

receiving a recommendation request;

determining a cost for a first order, the first order being applying the generation interface of the constraint filter before applying the rejection interface of the recommendation filter;

determining a cost for a second order, the second order being applying the generation interface of the recommendation filter before applying the rejection interface of the constraint filter;

establishing one of the first and second orders as the lowest cost order based on the respective costs thereof;

applying a series of filters to each of the plurality of items in response to the recommendation request, the series comprising the recommendation filter and the constraint filter in the lowest cost order; and

34 generating a list of recommendations based on the predicted rating values for the items that pass the constraint filter and the recommendation filter.

Claim 37 (new): The method of claim 36 wherein:

the building step comprises incorporating a free variable into the constraint; and

the recommendation request receiving step comprises receiving a value for the free variable.

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